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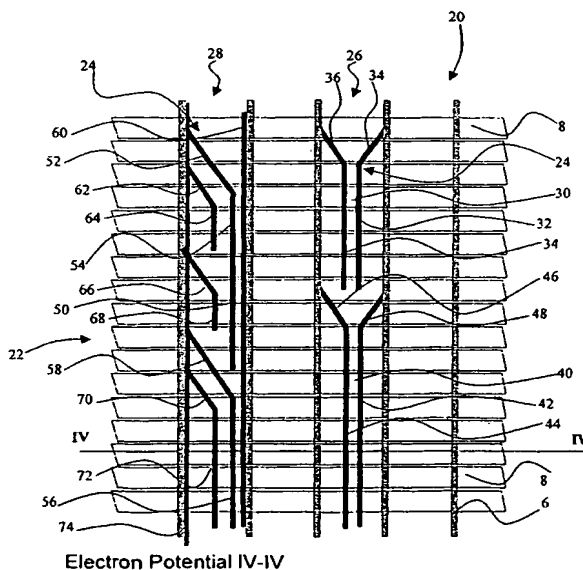
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(54) Title: **RADIATION TOLERANT CCD STRUCTURE**



Electron Potential IV-IV

(57) Abstract: A CCD structure (20) tolerant to the adverse formation of traps resulting from exposure to irradiation by particles such as protons and neutrons is described. The CCD comprises an image plane (22) having a number of parallel transfer channels. Path defining structures (24), such as barrier implants, define a principal electron flow path through the channel, and define a number of secondary paths which converge on the principal path. The paths ensure that signal charge generated across the entire width of the channel is collected together into regions of smaller area so that the likelihood of interaction with traps is reduced, and charge containment is maintained near the optimum for all signal levels up to the full well.

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